

The 2006-2007 Water Shortage & The Kissimmee – Okeechobee - Everglades System

Q&A

Q: Finally, it's started to rain, which should help the drought. So, why is water being released to the ocean? Shouldn't we be saving every drop?

A: We are storing as much rain from storm water runoff as possible, but there are limits. Why? Because there is NOT a lot of surface water storage available in most coastal communities, particularly areas east of I-95. That's why you may see water being discharged: to prevent rainfall-related flooding in some neighborhoods.

Flooding can happen very quickly because most of South Florida is relatively flat, and in heavily developed areas, natural lands that could absorb excess water are in short supply. Sudden, heavy rainfall also doesn't sit long enough on the soil to be well absorbed. In addition, most storm water systems in older communities are not designed to handle more than a few inches of rain without some flooding. Those neighborhoods, as well as larger city or county systems, all feed into our regional system. So, even if it doesn't look as if your neighborhood is in danger of flooding, many communities upstream or downstream of your neighborhood may need to drain excess water into the regional system.

In short, we simply do not have enough places to store all the rainfall we receive during the wet season, and there is no way to move water all the way back to Lake Okeechobee. Without the storage capacity to capture additional rainfall, the SFWMD must make periodic discharges of water to tide for flood protection. Without these discharges, streets and homes would be flooded.

As we head into the peak of the rainy season, additional rainfall likely will trigger the need for additional flood protection discharges to tide.

Q: How can you still claim there's a drought when my lawn is green and it's raining every day?

A: Central and northern portions of the SFWMD remain critically dry, as wet season rains have been highly localized over much of the southern third of the District. Over the past 30 days, for example, Lake Okeechobee, a primary backup water supply to five million South Floridians during the dry season, received less than five inches of rain, while portions of Miami-Dade and Broward counties received more than 12 inches over the same period. In Central Florida, this is still a drought.

Think of a drought as a climatological phenomenon where not enough rain enters the system; a water shortage is a community's inability to deal with a drought. While the Lower East Coast appears to be transitioning out of an 18-month-long, dry weather pattern, it certainly is still experiencing a water shortage.

Q: When will the District lift the restrictions?

A: It depends on rainfall, Lake Okeechobee, water levels in the regional system and a variety of other factors. Because this water shortage is the most severe and widespread since the 1930s, weeks or even months of constant rainfall will be needed. The District will continue to monitor conditions daily, and when they improve, the SFWMD Governing Board will make the decision to modify restrictions.

The water shortage will end only when enough rainfall soaks into our underground supplies, refills the Water Conservation Areas and raises the level of Lake Okeechobee. One indicator of adequate water supply is a water elevation of 14 feet in Lake Okeechobee, and computer modeling currently suggests there is only a 10 percent chance the lake level will climb to this elevation by the end of the current wet season.

Q: Why are lower Lake Okeechobee levels a concern?

A: It is a constant and delicate balance: water supply for people and the needs of the environment. Low water levels do benefit the lake ecosystem; for example, submerged aquatic vegetation receives more sunlight and thus tends to thrive, rejuvenating fish and wildlife habitats and improving the ecology of the lake.

Habitat recovery efforts are underway to remove harmful muck layers from the exposed lakebed. However, water levels that are too low can be detrimental and cause unwanted drying of critical areas.

Q: What will it take for Lake Okeechobee's water levels to rise again?

A: The water level in Lake Okeechobee remains extremely low for this time of year, and it will take above average rainfall – on and directly to the north of the lake – to replenish the lake to normal levels.

SFWMD meteorologists anticipate that it may be more than a month before flows into Lake Okeechobee from the Kissimmee Watershed are reestablished. No prediction can be made at this time as to precisely when the lake's water levels will return to their normal elevations.

Q: What is the minimum water level Lake Okeechobee must reach before we can end water restrictions?

A: That is hard to tell. A variety of factors, not just the lake level, will be used to determine modifications to current water restrictions; these include rainfall, groundwater levels, other surface water levels, soil moisture levels, salinity levels in coastal well fields, etc.

Water levels in Lake Okeechobee are approximately four feet below their historic average for this time of year. The levels will need to rise appreciably before any end to water restrictions can be declared, particularly within the Lake Okeechobee Service Area, which relies almost exclusively on the lake as a primary water resource.

Q: Why did you drain the lake last year? Isn't this all your fault?

A: The Army Corps of Engineers, which is responsible for managing water levels in the lake, relies on the best, most current information available to guide water management decisions; this includes long term weather predictions from the National Weather Service and others.

Water discharges were made from Lake Okeechobee during the summer of 2006, in anticipation of what was expected to be a very active hurricane season and in accordance with a complex regulation schedule, which helps direct water management decisions at specific water elevations and times of year. These resulted in a water level reduction of perhaps 1.5 feet over the course of several months.

The Army Corps of Engineers made these decisions in light of concerns over the structural integrity of the Herbert Hoover Dike and the serious flooding threat that high lake levels pose to communities around the lake. The same occurred prior to the active hurricane seasons of 2004 and 2005.

Should a storm of even moderate magnitude damage the dike when water stages are high, communities like Clewiston, Pahokee and Belle Glade could experience catastrophic flooding. As a matter of public safety, the lake cannot be managed at high elevations during the wet season, and even if no discharges had been made, we would still be in a severe, long-term drought and subsequent water shortage.

Q: How are local water levels in the Lower East Coast?

A: Above normal rainfall in June has replenished water levels along the Lower East Coast. In residential areas, canals are full; local storm water ponds are full; and groundwater levels have rebounded significantly. Water Conservation Areas 1, 2, and 3 are all above their floor elevations and have been recovering steadily since the start of the wet season.

Central and northern portions of the SFWMD, however, remain critically dry, as wet season rains have been highly localized over much of the southern third of the District. More than seven million people rely on an interconnected water management system, and negative impacts to one geographic area can adversely affect the entire system.

Q: Why are water restrictions in Martin and St. Lucie counties lower than they are in Palm Beach and Broward Counties?

A: Geologically, the Martin and St. Lucie County Service Area is different; residents here rely on different sources of water. These counties also house fewer residents. Thus, the stresses on local resources are different, and in extreme weather events, such as heavy rains or droughts, the resources here will respond differently relative to other areas of the District. All told, the SFWMD is comprised of five geologically unique service areas.

Q: What about other areas of the District: Orlando/Kissimmee and Southwest Florida?

A: Phase II and III water restrictions are already in place in the Northern Indian Prairie Basin and Lake Istokpoga, located just north of Lake Okeechobee.

Southwest Florida draws its water from ground and surface water sources that are not connected to Lake Okeechobee. But because these levels are low, Phase II Restrictions are in effect in Southwest Florida. These are stricter than the region's current year-round restrictions.

Although dry from recent low rainfall, the Kissimmee Chain of Lakes, Kissimmee River and Orlando areas are currently not under mandatory water restrictions, as surface water and groundwater levels there have remained just above their water shortage triggers.

However, as the dry season progresses, the District will continue to monitor water levels, and if appropriate, may issue warnings or restrictions should conditions indicate water resource problems in these areas. Voluntary water conservation efforts are encouraged across the South Florida Water Management District year-round.

Q: Are there any other long-range plans to address water supply?

A: Yes. The District is proactively working with local communities to develop and fund alternative water supply sources. South Florida residents now number more than seven million -- placing a huge demand on the region's water resources. Despite excellent freshwater sources, South Florida's water supply is not unlimited, especially given limited storage. Alternative water supply projects such as reverse osmosis, aquifer storage and recovery, and reclaimed water use, help create new sources to meet our long-term needs and water conservation stretches our existing supply. Communities large and small are encouraged to explore alternative water supplies and to apply for funding assistance. More information is available at www.sfwmd.gov.

The District, the U.S. Army Corps of Engineers, local governments and others are also implementing the Comprehensive Everglades Restoration Plan (CERP). This is a monumental plan with 68 project components to build and manage a more efficient system that can capture and store water that is now lost to sea. The project will help to restore the Everglades and replenish water supplies for the environment and economy.

The District has already jump-started eight CERP projects under its Acceler8 Everglades restoration initiative, including three key storage reservoirs. For more information, visit www.evergladesnow.org.

Q: My water doesn't come from a utility. It's pumped from my local lake, canal, or my private well. Do I need to follow restrictions?

A: In most cases, no matter where your water comes from, water restrictions apply to you. This is because surface and groundwater are interconnected. Water in lakes and canals helps to protect private and public wells from saltwater intrusion, and helps store rainfall to recharge groundwater resources including small wells and large aquifers.

100-percent reclaimed water, or water reclaimed from water sewage treatment plants, is one of very few uses NOT restricted. Reclaimed water is water that at one time would have been flushed away. It is heavily treated, not meant for drinking (non-potable), and used almost exclusively for irrigation. It is often transferred through special purple pipes.

Groundwater sources (wells) in the city of Okeechobee and a small portion of Okeechobee County within the Lake Okeechobee Service Area (communities around Lake Okeechobee) also are not restricted, because these inland wells are not threatened by saltwater intrusion, but voluntary adherence to the restrictions is encouraged.

Q: What is saltwater intrusion and why should I care about it?

A: Saltwater intrusion is a natural process that occurs in virtually all coastal areas, and involves the encroachment of saltwater from the sea flowing inland, into freshwater aquifers. Coastal wells are the most vulnerable to contamination by saltwater. When too much invades wells or aquifers, they may become unusable!

In South Florida, we rely on our aquifers for a substantial portion of our regional water supply, and the salt and other substances carried by seawater are a huge detriment. The SFWMD resists saltwater intrusion by maintaining prescribed levels of freshwater in the system and by making appropriate freshwater discharges via our canal system.

Thus, by helping to keep more water in the system, this year's water use restrictions actually help reduce the detrimental impacts of saltwater intrusion on our water supply resources. Area residents should also be concerned about saltwater intrusion because it could eventually hit them in their pocketbooks. When utilities must pay for necessary upgrades and facilities to treat saltwater before it is deemed safe to drink, they must pass those costs to consumers.